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## The Outlook in Cancer

THE encouraging gains made in the control of cancer (malignant neoplasms) tend to be overlooked because of the heavy death toll taken by the disease. Much has been accomplished in lengthening the life of cancer patients, even though the methods of treatment have been largely limited to surgery and radiation. It is estimated by the American Cancer Society that if all the patients received early and adequate treatment, one half would survive at least five years after diagnosis of the disease.

New facts on the prognosis of cancer patients are available from a large-scale study sponsored by the National Cancer Institute and based upon follow-up data compiled from the records of 99 hospitals in the United States. Table 1 on the next page summarizes the five-year survivorship record separately for male and female patients with cancer of various sites whose disease was diagnosed in 1950 or later. This aspect of the study included approximately 117,000 patients.

It is apparent from the table that the outlook for cancer patients varies with a number of factors, such as site of the malignancy, stage at diagnosis, and sex of the patient. Females generally showed higher survivorship rates than males. The rates varied considerably from site to site even within the same organ system of the body. Illustrative are figures for various organs of the digestive tract; for both the large intestine and rectum the five-year survivorship rate among males was close to 30 percent, but for cancer of the stomach, it was only 8 percent.

The five-year survivorship rate for women with breast cancer was 50 percent and slightly higher for those with cancer of the uterus. However, the corresponding rate for males with cancer of the prostate was only 24 percent.

The record for cancers of the lung and bronchus is less favorable than that for any other major site; the five-year survivorship rate was only 4 percent for males, the chief victims of such cancers. On the other hand, patients with skin cancer have an excellent survivor-

ship record. Nearly three fourths of the male patients and four fifths of the female patients with basal cell skin cancer were alive five years after diagnosis.

Table 1 also indicates the importance of early diagnosis. For example, the five-year survival rate among males with stomach cancer was only 8 percent, including cases at all stages at the time of diagnosis; this compares with 30 percent for cases where the lesions were still localized at diagnosis.

It should be noted that the figures in the table understate the chances of survival in cancer, in that they do not take into account deaths that would be normally expected from other causes; the number of such deaths is very considerable at the older ages, where cancer is largely concentrated. "Adjusted" survival rates, which allow for the expected deaths from causes other than cancer, are materially higher than the "observed" rates. Thus, for cancer of the large intestine among men, the adjusted five-year survival rate is estimated to be 38 percent, compared with an observed rate of 29 percent.

In judging the significance of these findings on survival of cancer patients, some attention needs to be given to the frequency and trends of cancer according to site; the facts for white persons in the United States are shown in Table 2. In males, the most frequent site

**TABLE 1—PERCENTAGE OF CANCER PATIENTS SURVIVING FIVE YEARS AFTER DIAGNOSIS SELECTED SITES, BY STAGE AT DIAGNOSIS AND BY SEX**

End-Results Evaluation Program, National Cancer Institute*
All Registries Combined. White Patients Diagnosed 1950 and After

| Primary Site | Males | | Females | | Primary Site | Males | | Females | |
|---|---|---|---|---|---|---|---|---|---|
| | All Stages | Localized Lesions† | All Stages | Localized Lesions† | | All Stages | Localized Lesions† | All Stages | Localized Lesions† |
| Tongue | 24 | 41 | 34 | ‡ | Prostate | 24 | 34 | — | — |
| Esophagus | 2 | 24 | 5 | ‡ | Skin, basal cell | 71 | 72 | 80 | 81 |
| Stomach | 8 | 30 | 9 | 31 | Thyroid gland | 52 | ‡ | 74 | 87 |
| Large intestine | 29 | 51 | 35 | 61 | Lymphosarcoma | 20 | — | 25 | — |
| Rectum | 28 | 51 | 34 | 57 | Hodgkin's disease | 24 | — | 35 | — |
| Lung and bronchus | 4 | ‡ | 8 | ‡ | Leukemia, chronic lymphatic | 18 | — | 27 | — |
| Breast | ‡ | ‡ | 50 | 72 | Leukemia, acute lymphatic | 7 | — | 6 | — |
| Uterine cervix | — | — | 53 | 74 | | | | | |
| Uterine corpus | — | — | 65 | 77 | | | | | |
| Ovary | — | — | 24 | 60 | | | | | |

*Survival Experience of Patients with Malignant Neoplasms. A Report Prepared by the End-Results Group for the Fourth National Cancer Conference, Minneapolis, September 13-15, 1960. U. S. Department of Health, Education, and Welfare, Public Health Service.

†Cancer confined to the site of origin.

‡Not available, or number of cases too small to be statistically significant.

**TABLE 2—MORTALITY FROM MALIGNANT NEOPLASMS BY SITE**
White Persons by Sex. United States, 1958 and 1949

| Site | Males | | Females | |
|---|---|---|---|---|
| | 1958 | 1949 | 1958 | 1949 |
| | Death Rate per 100,000 | | | |
| Malignant Neoplasms—Total | | | | |
| Crude death rate | 161.8 | 145.7 | 139.5 | 140.2 |
| Age-adjusted death rate* | 141.1 | 130.1 | 111.8 | 120.6 |
| | Percent Distribution of Deaths | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Buccal cavity and pharynx | 3.3 | 3.9 | 1.1 | 1.0 |
| Digestive organs and peritoneum | 35.8 | 43.1 | 34.1 | 36.8 |
| Esophagus | 2.5 | 2.8 | 0.8 | 0.8 |
| Stomach | 9.3 | 14.6 | 6.5 | 8.9 |
| Intestines, including duodenum | 9.7 | 10.3 | 12.9 | 12.6 |
| Rectum | 4.7 | 5.7 | 4.0 | 4.5 |
| Biliary passages and liver | 3.1 | 4.2 | 4.5 | 5.6 |
| Pancreas | 5.5 | 4.9 | 4.4 | 3.6 |
| Respiratory system | 22.6 | 15.4 | 4.5 | 3.7 |
| Lung and bronchus | 20.7 | 13.1 | 4.0 | 3.1 |
| Breast | 0.2 | 0.2 | 19.1 | 18.3 |
| Genital organs—male | 10.9 | 11.4 | — | — |
| Prostate | 10.1 | 10.4 | — | — |
| Genital organs—female | — | — | 18.5 | 20.6 |
| Uterus | — | — | 11.3 | 14.4 |
| Ovary | — | — | 6.5 | 5.6 |
| Urinary organs | 6.1 | 6.3 | 3.4 | 3.4 |
| Bladder | 3.9 | 4.2 | 1.9 | 2.0 |
| Leukemia and aleukemia | 5.3 | 4.6 | 4.3 | 3.4 |
| Lymphosarcoma† | 5.2 | 4.2 | 4.3 | 2.9 |
| Hodgkin's disease | 1.4 | 1.5 | 1.0 | 1.0 |
| Other and unspecified sites | 10.7 | 10.7 | 10.7 | 9.8 |

*On basis of total population, United States, 1940.
†Includes other neoplasms of lymphatic and hematopoietic tissues.
Source of basic data: Reports of National Office of Vital Statistics.

of fatal cancer is the lung and bronchus, accounting for 21 percent of the total male cancer mortality in 1958, compared with 13 percent in 1949. The prostate, intestines, and stomach each accounted for approximately 10 percent of the cancer deaths among males in 1958, smaller proportions than in 1949. The impressive decrease for cancer of the stomach undoubtedly reflects better differentiation of primary site in the digestive tract, as well as better differentiation between malignant and nonmalignant conditions in the stomach. Another important development among males has been the relatively sharp increase in the proportion of deaths due to leukemia and lymphosarcoma, which together now account for more than 10 percent of the total.

Among females, the breast is the most common site of fatal cancer; 19 percent of the female cancer deaths in 1958 were due to malignancies of the breast, or a slightly greater proportion than in 1949. Cancer of the intestines, next in frequency, accounted for 13 percent of the deaths in 1958, or about

the same as in the earlier year. Third in rank, cancer of the uterus was responsible for 11 percent of the cancer deaths among females, or appreciably less than in 1949. The proportion of deaths from lung cancer, leukemia, and lymphosarcoma increased somewhat among females, and currently each accounts for about 4 percent of the total.

Progress is steadily being made in the control of cancer. Much more can be accomplished, even in the present state of knowledge, through more intensive application of our available resources. Nevertheless, the main hope for major advances rests upon fruitful research on the cause or causes of cancer. Recent work revives the hypothesis that viruses may be implicated in some forms of the disease. Whether or not this proves true, a new orientation appears to be evolving in the field of cancer research. Greater emphasis is being placed on discovering new clues as to the nature of the disease and investigating new measures of prevention and treatment, including chemotherapy.

## Accident Toll in 1960—92,000 Lives

ACCIDENTS caused about 92,000 deaths in the United States during 1960, approximately the same number as in the year before, but about 1,500 more than in 1958. When account is taken of the increase in population, however, it appears that some progress has been made in reducing the accident hazard. Provisional figures indicate that the accident death rate in the year just ended dipped slightly below the all-time low of 52.2 per 100,000 population established in 1959.

Motor vehicle accidents were responsible for the loss of approximately 38,000 lives during 1960, or a few hundred more than in 1959. This rise reflects the increase in the amount of travel; the motor vehicle accident death rate per 100 million miles of travel in 1960 may set an all-time low of 5.3.

Accidents in and about the home took 26,500 lives in 1960, or an increase of approximately 500. The annual toll from public accidents other than those involving motor vehicles continued at the level of about 16,500. The number fatally injured in accidents arising out of and in the course of employment in 1960 was little different from the figure for the year before, namely, 13,800; approximately 2,800 of these deaths resulted from motor vehicle accidents (which number is also included in the total of motor vehicle fatalities).

For Canada, only data on motor vehicle accidents are available at this time. Preliminary figures indicate that motor vehicle accidents

## ACCIDENTS TAKING 25 OR MORE LIVES, IN ORDER OF IMPORTANCE

Continental United States, 1956-60

| Date | Place | Type of Accident | Number of Lives Lost |
|---|---|---|---|
| **1960** | | | |
| December 16 | New York City | Two scheduled planes collided in mid-air over Staten Island, New York | 134 |
| March 17 | Near Tell City, Ind | Scheduled plane exploded in flight | 63 |
| October 4 | Boston, Mass | Scheduled plane crashed into Boston Harbor | 62 |
| January 18 | Near Richmond, Va | Scheduled plane crashed into swampy ravine | 50 |
| December 19 | Brooklyn, N. Y | Fire swept aircraft carrier in Naval Shipyard | 50 |
| January 6 | Near Wilmington, N. C | Scheduled plane "disintegrated" in flight | 34 |
| September 10 | South and Northeast | Hurricane | 30 |
| May 5 | Eastern Oklahoma, and Arkansas | Tornadoes | 29 |
| **1959** | | | |
| February 3 | New York City | Scheduled plane plunged into East River | 65 |
| May 12 | Near Baltimore, Md | Scheduled plane disintegrated in mid-air | 31 |
| August 17 | West Yellowstone, Mont | Series of earthquakes | 29 |
| October 30 | Near Charlottesville, Va | Scheduled plane crashed | 26 |
| December 1 | Montoursville, Pa. (Near Williamsport) | Scheduled plane rammed mountain | 25 |
| **1958** | | | |
| December 1 | Chicago, Ill | Fire spread through school | 95 |
| April 21 | Near Las Vegas, Nev | Scheduled passenger plane and military jet collided | 49 |
| February 1 | Over Los Angeles, Calif | Two military planes collided | 48 |
| September 15 | Near Bayonne, N. J | Passenger train plunged into Newark Bay | 48 |
| April 6 | Near Midland, Mich | Scheduled passenger plane crash | 47 |
| November 18 | Off Gull Island, Mich | Freighter sank in Lake Michigan | 33 |
| June 4 | Northwestern Wisconsin | Group of tornadoes | 30 |
| February 23-25 | Harlem, New York City | Poisoning due to wood alcohol | 27 |
| February 28 | Near Prestonsburg, Ky | School bus plunged into river | 27 |
| August 15 | Nantucket, Mass | Scheduled passenger plane crash | 25 |
| **1957** | | | |
| June 27-28 | Louisiana, Texas, and several other States | Hurricane and floods | 350* |
| February 17 | Warrenton, Mo | Fire destroyed home for the aged | 72 |
| May 20 | Kansas City area | Tornado | 39 |
| February 4 | Near Bishop, Va | Gas explosion in coal mine | 37 |
| March 22-25 | Great Plains States | Blizzard | 29 |
| **1956** | | | |
| June 30 | Over Grand Canyon, Ariz | Two scheduled passenger airplanes collided | 128 |
| July 13 | Fort Dix, N. J | Military plane crash | 46 |
| February 17 | Near Oakland, Calif | Military plane crash | 40 |
| January 22 | Los Angeles, Calif | Passenger train derailed | 30 |
| April 15 | Near Birmingham, Ala | Tornado | 25 |

*Known dead.

Note: Figures for natural disasters are approximate.

took about 3,700 lives in the year just ended, or approximately the same as in 1959. This means that the motor vehicle accident mortality in Canada may have dropped below the rate of 21.1 per 100,000 population recorded in 1959.

Catastrophes—accidents in which five or more persons are killed—caused somewhat over 1,400 deaths in the continental United States in 1960, or about the same number as in 1959. In the year just ended there were eight major catastrophes—those which took the lives of at least 25 persons—accounting for approximately 450 fatalities. As the table on page 5 shows, five of the major disasters involved scheduled aviation. The worst disaster of the year was the mid-air collision between two scheduled planes over Staten Island, N. Y., on December 16, causing 134 deaths (including casualties on the ground)—the heaviest loss of life in aviation history. Another major catastrophe was the explosion of a scheduled plane in flight near Tell City, Ind., on March 17, taking 63 lives. The other three aviation disasters included the plane crash into Boston Harbor on October 4, which killed 62 persons; the plane crash into a swampy ravine near Richmond, Va., on January 18, which caused 50 fatalities; and the plane which "disintegrated" in flight near Wilmington, N. C., killing 34 persons on January 6—the earliest disaster of the year. On December 19, a fire swept an aircraft carrier in the Naval Shipyard at Brooklyn, N. Y., taking 50 lives. There were two natural disasters during the year just ended: Donna, the hurricane which hit the South and Northeast early in September, accounted for 30 fatalities; and the tornadoes which struck eastern Oklahoma and Arkansas on May 5 resulted in 29 deaths, most of them in Oklahoma.

Accidents involving motor vehicles were responsible for nearly one third of the approximately 1,400 lives lost in catastrophes during 1960. Civil aviation accounted for almost as many fatalities. Fires and explosions—most of them in the home—caused about one fifth of all fatal injuries sustained in catastrophes. Natural catastrophes, military aviation, and water transportation contributed appreciably to the total.

Civil aviation catastrophes took a much larger toll in 1960 than in the year before. Military aviation showed only a moderate rise in the number of fatalities. On the other hand, fatalities in catastrophic motor vehicle accidents and in fires and explosions were appreciably lower in 1960 than in 1959. The loss of life in water transportation and railroad accidents taking five or more lives was also reduced in the year just ended. Catastrophic accidents in mines and quarries accounted for approximately the same death toll in both years.

## Migration to the West Continues

THE traditional mobility of the American people was sustained during the 1950's, with about one fifth of the population changing residence each year. As in previous decades, the West continued to attract thousands of individuals and families from other sections of the country, principally the South and Midwest. Large numbers of people also moved out of the Northeast, but this loss was more than offset by in-migrants from Puerto Rico and Europe. The table on page 8 shows for each State the gain or loss in population resulting from civilian migration during the 1940's and 1950's.

California experienced by far the largest gains in population through migration. The net in-migration of civilians to California averaged 259,000 a year in the 1940's and exceeded 300,000 annually during the recent decade. As a consequence of this large influx, supplemented by the sustained high birth rates of the postwar years, California's total population increased by 5,131,000 from April 1950 through March 1960.* This represents more than 18 percent of the increase in resident population for the country as a whole during the decade.

Florida also had a marked increase in population through civilian migration in recent years. In fact, the net gain of 1,608,000 by migration during the 1950's is equivalent to almost three fifths of the civilian population in that State at the start of the decade. Reflecting the substantial number of newcomers, Florida's total population increased by 78.7 percent in the past decade; this was larger than the rate of growth in any other State in the Union. Four other States, scattered throughout the country, also gained relatively large numbers of migrants in the 1950's. New Jersey averaged 59,000 net in-migrants annually, Ohio averaged 45,000, and Arizona and Maryland about 32,000 each.

In contrast, 28 States and the District of Columbia had more civilians leaving than coming into their area during the 1950's. In Pennsylvania and six southern States the loss averaged more than 30,000 persons annually. West Virginia experienced the largest civilian exodus; its loss of 435,000 persons by migration during the decade exceeded the natural increase of population (the excess of births over deaths). The large volume of out-migration also caused decreases in the total population of Arkansas, the District of Columbia, and Mississippi. In Mississippi, however, the loss amounted to less than 1,000, despite the net out-migration of 430,000 civilians.

In most southern States the out-

*Total population includes the Armed Forces stationed in each State. However, the shifts in military personnel during the 1950's did not appreciably affect the changes in total population for the individual States.

## POPULATION CHANGE DUE TO CIVILIAN MIGRATION,* BY STATE, 1940-1960

| State | Change per Decade, Thousands† | | Change per Decade, Percent‡ | |
|---|---|---|---|---|
| | April 1950-March 1960 | April 1940-March 1950 | April 1950-March 1960 | April 1940-March 1950 |
| New England | 22 | 166 | 0.2 | 2.0 |
| Maine | − 74 | − 15 | − 8.1 | − 1.8 |
| New Hampshire | 10 | 6 | 1.9 | 1.2 |
| Vermont | − 37 | − 14 | − 9.8 | − 3.9 |
| Massachusetts | − 91 | 58 | − 2.0 | 1.3 |
| Rhode Island | − 30 | 2 | − 3.9 | .3 |
| Connecticut | 243 | 129 | 12.1 | 7.6 |
| Middle Atlantic | 455 | 450 | 1.5 | 1.6 |
| New York | 275 | 376 | 1.9 | 2.8 |
| New Jersey | 592 | 307 | 12.3 | 7.4 |
| Pennsylvania | − 411 | − 233 | − 3.9 | − 2.4 |
| East North Central | 861 | 908 | 2.8 | 3.4 |
| Ohio | 446 | 319 | 5.6 | 4.6 |
| Indiana | 86 | 137 | 2.2 | 4.0 |
| Illinois | 170 | 115 | 2.0 | 1.5 |
| Michigan | 195 | 387 | 3.1 | 7.4 |
| Wisconsin | − 36 | − 49 | − 1.0 | − 1.6 |
| West North Central | − 790 | − 858 | − 5.6 | − 6.4 |
| Minnesota | − 79 | − 144 | − 2.7 | − 5.2 |
| Iowa | − 218 | − 167 | − 8.3 | − 6.6 |
| Missouri | − 133 | − 149 | − 3.4 | − 3.9 |
| North Dakota | − 102 | − 113 | − 16.5 | − 17.6 |
| South Dakota | − 94 | − 75 | − 14.5 | − 11.7 |
| Nebraska | − 118 | − 124 | − 8.9 | − 9.4 |
| Kansas | − 46 | − 85 | − 2.4 | − 4.7 |
| South Atlantic | 636 | 0 | 3.0 | .0 |
| Delaware | 58 | 24 | 18.2 | 9.0 |
| Maryland | 319 | 257 | 13.8 | 14.2 |
| District of Columbia | − 162 | 26 | − 21.1 | 4.0 |
| Virginia | 16 | 109 | .5 | 4.1 |
| West Virginia | − 435 | − 203 | − 21.7 | − 10.7 |
| North Carolina | − 311 | − 261 | − 7.7 | − 7.3 |
| South Carolina | − 239 | − 230 | − 11.4 | − 12.1 |
| Georgia | − 216 | − 290 | − 6.3 | − 9.3 |
| Florida | 1,608 | 568 | 58.9 | 30.0 |
| East South Central | − 1,439 | − 1,216 | − 12.6 | − 11.3 |
| Kentucky | − 389 | − 362 | − 13.4 | − 12.8 |
| Tennessee | − 256 | − 117 | − 7.8 | − 4.0 |
| Alabama | − 364 | − 313 | − 11.9 | − 11.1 |
| Mississippi | − 430 | − 425 | − 19.9 | − 19.5 |
| West South Central | − 577 | − 891 | − 4.0 | − 6.8 |
| Arkansas | − 431 | − 389 | − 22.6 | − 20.0 |
| Louisiana | − 44 | − 131 | − 1.6 | − 5.5 |
| Oklahoma | − 221 | − 413 | − 10.0 | − 17.7 |
| Texas | 119 | 42 | 1.6 | .7 |
| Mountain | 560 | 174 | 11.2 | 4.2 |
| Montana | − 24 | − 34 | − 4.1 | − 6.1 |
| Idaho | − 38 | − 20 | − 6.5 | − 3.8 |
| Wyoming | − 10 | − 7 | − 3.5 | − 2.8 |
| Colorado | 165 | 39 | 12.6 | 3.5 |
| New Mexico | 46 | 12 | 6.9 | 2.3 |
| Arizona | 326 | 138 | 43.9 | 27.7 |
| Utah | 11 | 14 | 1.6 | 2.5 |
| Nevada | 84 | 33 | 53.5 | 30.0 |
| Pacific | 3,218 | 3,262 | 21.7 | 32.2 |
| Alaska | 28 | 26 | 25.9 | 36.1 |
| Washington | 115 | 354 | 5.0 | 20.6 |
| Oregon | 26 | 300 | 1.7 | 27.5 |
| California | 3,081 | 2,588 | 29.6 | 37.7 |
| Hawaii | − 31 | − 7 | − 6.5 | − 1.8 |

*Comprises net in-migrants from abroad and net interstate migration of civilians.
†Each estimate has been independently rounded; hence, the sums of parts may differ slightly from the totals.
‡Percent of civilian population at start of decade.
Note: Minus sign (−) denotes loss.
Source: Figures for 1940-1950 are from the Bureau of the Census; those for 1950-1960 are provisional estimates by the Statistical Bureau of the Metropolitan Life Insurance Company, based on the final counts from the 1960 Census.

flow of population has continued for a long time. The movement out of the East South Central States has been particularly marked, totaling 1,439,000 during the 1950's and 1,216,000 during the 1940's. The West North Central area has also sustained large losses by migration for many years.

Throughout our history, economic opportunity and better living conditions have been important factors in the redistribution of population. In recent decades, increasing numbers of our older population have been attracted to areas with mild climates, such as Florida, Arizona, and southern California. Defense needs have likewise contributed to the interstate and overseas movement of our military and civilian population.

## The Frequency of Suicide

EACH year, more than 18,000 people in the United States die by their own hand. This is at least twice the toll taken by homicide and about 12 times the loss of life in all types of aircraft accidents. Suicide ranks eleventh among the causes of death; among white males, who account for about three fourths of all self-inflicted deaths in the country, suicide ranks eighth.

The suicide rate is appreciably higher in the United States than in Canada; in 1958, the rates for the two countries were 10.7 and 7.5 per 100,000, respectively. In some measure, the higher rate reflects the greater proportion of older people in the United States, but comparative figures by age show Canada to have the more favorable experience at every period of life. The relative frequency of suicide in the United States is several times that in Ireland, Northern Ireland, Greece, or a number of Latin American countries. On the other hand, our suicide rate is no more than half that recorded in Austria, Hungary, West Germany, or Japan.

Suicides in the United States are more frequent in the spring than in any other season of the year. In 1956-58, April was the peak month, with a daily toll 13 percent greater than the daily average for the 3-year period as a whole. In May, the excess was 6 percent, while in June it was only about 1 percent. Suicides were least frequent in December, when the daily number was 8 percent below the daily average for the entire period.

The table on page 10 shows the relative frequency with which the leading means of suicide are employed by white males and females at various age periods. Somewhat over half of all the white males who killed themselves in 1958 used firearms; the proportion varied only slightly with age. Poisoning and hanging each accounted for

**PERCENT DISTRIBUTION OF SUICIDES BY MEANS OF INJURY**
White Persons by Sex and Age. United States, 1958

| Means of Injury | All Ages | Under Age 20 | 20-44 | 45-64 | 65 and Over |
|---|---|---|---|---|---|
| | White Males | | | | |
| Total—Number | 13,707* | 316 | 4,243 | 5,834 | 3,309 |
| —Death Rate per 100,000 | 18.0 | 1.1 | 17.0 | 37.4 | 51.9 |
| —Percent | 100 | 100 | 100 | 100 | 100 |
| Poisoning | 18 | 13 | 24 | 18 | 10 |
| Hanging and strangulation | 19 | 34 | 14 | 19 | 24 |
| Firearms and explosives | 54 | 51 | 55 | 55 | 52 |
| Other | 9 | 2 | 7 | 8 | 14 |
| | White Females | | | | |
| Total—Number | 3,977* | 107 | 1,527 | 1,663 | 679 |
| —Death Rate per 100,000 | 5.1 | 0.4 | 5.9 | 10.1 | 8.9 |
| —Percent | 100 | 100 | 100 | 100 | 100 |
| Poisoning | 35 | 32 | 37 | 38 | 28 |
| Hanging and strangulation | 21 | 12 | 14 | 24 | 31 |
| Firearms and explosives | 25 | 46 | 36 | 19 | 15 |
| Other | 18 | 10 | 13 | 19 | 26 |

*Includes suicides of unspecified age.
Source of basic data: National Office of Vital Statistics, *Vital Statistics of the United States 1958.*

nearly one fifth of the suicides among males, but the age distribution of the victims using these means are in sharp contrast. The proportion of men committing suicide by poisoning increased from 13 percent under age 20, to 24 percent at ages 20-44, then decreased progressively to 10 percent at ages 65 and over. On the other hand, the proportion of males hanging themselves decreased from 34 percent under age 20 to 14 percent at ages 20-44, but then rose to 24 percent at ages 65 and over.

Among white females, poisoning was the most frequently used means of suicide, accounting for slightly more than one third of the female total. Firearms ranked second, being employed by one fourth of the females who committed suicide. This means of injury decreased rapidly in relative importance with advance in age, from nearly half of the total among females under age 20 to less than one sixth at ages 65 and over. Hanging, however, increased in relative frequency with advance in age.

## MORTALITY FROM SELECTED CAUSES

Industrial Policyholders, Metropolitan Life Insurance Company

November 1960

| Cause of Death | Annual Rate per 100,000 Policyholders* | | | | |
|---|---|---|---|---|---|
| | November | | Year to Date | | |
| | 1960† | 1959† | 1960† | 1959† | 1958 |
| All Causes | 621.6 | 625.5 | 675.3 | 667.1 | 665.0 |
| Tuberculosis (all forms) | 4.9 | 5.7 | 5.5 | 5.8 | 6.8 |
| Communicable diseases of childhood | 0.1 | — | 0.1 | 0.1 | 0.2 |
| Acute poliomyelitis | 0.3 | 0.6 | 0.1 | 0.2 | 0.1 |
| Malignant neoplasms | 142.1 | 135.1 | 143.1 | 142.3 | 140.5 |
| Digestive system | 47.2 | 45.5 | 48.0 | 48.3 | 47.0 |
| Respiratory system | 21.1 | 18.7 | 21.6 | 21.3 | 19.8 |
| Diabetes mellitus | 13.3 | 12.5 | 15.3 | 14.8 | 15.4 |
| Diseases of the cardiovascular-renal system | 323.3 | 337.7 | 359.2 | 355.7 | 352.5 |
| Vascular lesions, central nervous system | 59.1 | 65.2 | 66.9 | 67.8 | 66.6 |
| Diseases of heart | 240.8 | 245.6 | 265.4 | 261.5 | 260.8 |
| Chronic rheumatic heart disease | 9.3 | 9.2 | 10.8 | 10.7 | 11.5 |
| Arteriosclerotic and degenerative heart disease | 194.2 | 197.6 | 213.1 | 208.0 | 206.6 |
| Diseases of coronary arteries | 112.2 | 114.4 | 124.8 | 124.0 | 118.4 |
| Hypertension with heart disease | 26.0 | 27.9 | 29.4 | 30.6 | 31.7 |
| Other diseases of heart | 11.4 | 10.9 | 12.1 | 12.1 | 10.9 |
| Nephritis and nephrosis | 5.5 | 7.0 | 6.8 | 7.2 | 7.4 |
| Pneumonia and influenza | 14.0 | 17.3 | 21.8 | 18.6 | 20.7 |
| Complications of pregnancy, childbirth | 0.3 | 1.0 | 0.6 | 0.8 | 0.8 |
| Suicide | 5.9 | 4.6 | 6.2 | 6.4 | 6.1 |
| Homicide | 2.1 | 3.2 | 2.8 | 2.9 | 2.8 |
| Accidents—total | 30.6 | 29.4 | 32.6 | 33.3 | 34.2 |
| Motor vehicle | 14.5 | 14.1 | 13.9 | 14.5 | 14.7 |
| All other causes | 84.7 | 78.4 | 88.0 | 86.2 | 84.9 |

*These death rates relate to persons insured under Weekly or Monthly premium-paying Industrial policies and Monthly premium-paying Ordinary policies for small amounts of insurance.

†Beginning with January 1959, deaths have been classified according to the Seventh Revision of the International List of Causes of Death. Consequently, the death rates for individual causes in 1959 and 1960 are not strictly comparable with those for earlier periods. Rates for 1960 are provisional.

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# MORTALITY FROM ALL CAUSES

INDUSTRIAL POLICYHOLDERS · METROPOLITAN LIFE INSURANCE COMPANY




| (DEC) | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1959 | 7.4 | 6.8 | 7.0 | 7.2 | 6.8 | 6.6 | 6.5 | 6.0 | 6.2 | 6.5 | 6.3 | 6.5 |
| 1960 | 7.2 | 7.6 | 8.0 | 6.9 | 6.9 | 6.5 | 6.3 | 6.3 | 6.2 | 6.1 | 6.2 | |

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